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PA - (MITU) MITSUBISHI KASEI CORP

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AB - J06179644 Prepn. of N-(alpha-alkoxyethyl)formamide (I) is effected by
reaction of N-(alpha-hydroxyethyl)formamide (II), obtd. by reaction of
formamide (III) with acetaldehyde in the presence of basic catalyst,
with prim. or sec. alcohols in the presence of acidic catalyst. (III)
contains below 1000 ppm diformamide.

- Pref. acetaldehyde contg. less than 300 ppm acetic acid is used.
Purified (I) is obtd. by distn. of (I) under reduced pressure (max.
temp. is 70-100 deg.C and the max. pressure is 2-30 mmHg). In the
prepn. of (II), the salt of strong alkali e.g. hydroxide of alkali
metal (Li, Na or K etc.) and weak acid e.g. organic acid, phenols or
sulphurous acid etc., is used as basic catalyst. The catalyst is used
in an amt. of 0.01-10 (0.1-5) mol% to (III). The mol ratio of (III) :
acetaldehyde is 1 : 1.0-5.0. The reaction is carried out at (-)10-100
(0-40) deg.C. The prim. or sec. alcohol e.g. methanol, ethanol, etc.
is used in an amt. of 1.0-30 times mol to (II). Acidic catalyst e.g.
H₂SO₄ or HCl etc. is used in an amt. of 0.001-10 (0.1-5) mol%. The
reaction is carried out at (-)10-60 (0-40) deg.C.
- USE/ADVANTAGE - (I) is a useful material as an intermediate in the
prepn. of N-vinylformamide. (I), which has good thermal stability, is
obtd. in high yield (95-97%).(Dwg.0/0)

CN - 9430-C3801-P

IW - PREPARATION N ALPHA ALKOXYETHYL FORMAMIDE N VINYL FORMAMIDE REACT N
ALPHA HYDROXYETHYL FORMAMIDE OBTAIN FORMAMIDE ACETALDEHYDE PRIMARY SEC
ALCOHOL PRESENCE ACIDIC CATALYST

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ALCOHOL PRESENCE ACIDIC CATALYST

NC - 001

OPD - 1992-12-15

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PAW - (MITU) MITSUBISHI KASEI CORP

TI - Prepn. of N-(alpha-alkoxyethyl)-formamide used for N-vinyl- formamide
- by reacting N-(alpha-hydroxyethyl)-formamide obtd. from formamide
and acetaldehyde with prim. or sec. alcohol in presence of acidic
catalyst

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